

OFFICIAL RESULT OF LAST TUESDAY'S ELECTION.

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MYSTERIES OF THE MOON.

Interesting Observations by Prof.
Pickering of Harvard University.
From the Boston Journal.

In a broad, flat expanse on the moon's northern hemisphere, known to astronomers as the Mare Serenitatis, there is a whitish spot, some four or five miles in diameter, to which the name of Linne has been given. It has been assiduously watched for many years, because about 1866 something occurred which caused a wonderful change in its appearance. Before it looked like a crater, but little elevated above the plain and its throat filled with black shadow. Suddenly, instead of a crater, it appeared as a white spot. Later on a dark center showed in the spot, as if

the missing crater had yawned again beneath its mysterious covering. But no further change occurred, and as more than thirty years have since passed without any alteration in the aspect of Linné, some astronomers have begun to question whether the observers of a quarter of a century ago did not make a mistake.

Now Prof. Pickering rescues Linné's reputation as a genuine marvel but at the same time increases the mystery. He says that the shadow of the earth passed like a cooling cloud across the face of the moon, he found by careful measurements that the size of the white spot appearing in the shadow increased while buried in shadow, and he accounts for the expansion in the diameter of the spot being about one-sixth of a mile.

As the eclipse passed off it began to contract again.

But this is not all. Measurements of the enigmatical spot made when there was no eclipse showed that it undergoes a similar but much more extensive fluctuation in size. Sometimes the variation in the intensity of the sunlight falling upon it in the course of the lunar day. A day upon the moon is equal to about fourteen of our days—that is to say, nearly two weeks elapse between the time when the spot appears on the face of the moon. Measurements of Linne made two days after the sun has risen upon it give it a diameter of nearly five miles. Measured after it has been exposed eight days to the unclouded light of the sun, it is less than two miles and a half. During the long lunar afternoon, as the sun

gradually sinks and the fierceness of its heat becomes a little tempered, Lüne begins to increase again in diameter, and when the sun gets near the horizon the wonderful spot is seen to have almost regained the magnitude it possessed just after emerging from the lunar night.

These changes suggest frost spreading in the shadow and receding in the sunshine, or a cloud alternately growing and contracting under similar influences. The fact that the spot is picked out just on the shadow of the earth falling for a short time upon the spot causes it to expand to a measurable degree shows how sensitive it is to alterations of temperature.

The frost on the moon and the moon presupposes an atmosphere and vapors there. They certainly must be wider

different from such things upon the earth, but if they are abundant enough to cause notions and changes visible to our eyes, their presence may possibly indicate the existence of yet more interesting things in the lunar world. There should be added because the fact, however, may increase the probability, may in the end aid in solving it—that changes like those witnessed in Linne do not appear to affect most of the other well-known markings on the moon. At the time the eclipses were observed, I was picking out carefully watched three or four remarkable localities on the lunar surface, where craters yawn or flat plains lie extended, but not the slightest alteration was observed in their appearance during the time that Linne was depending under the chilling effect of the

part's shadow and then shrinking again as the untempered blaze of the sun fell upon it.

There is, however, at least one other locality on the moon where curious chances of a similar origin have been observed. It is the crater of Plato. This is also in the northern lunar hemisphere, about 500 miles from Linné. It is astonishingly regular in outline, about sixty miles in diameter, very flat, and completely encircled with a steep, even rim. The interior of the crater forms a fine a valley for a nation of hermits to inhabit as could well be imagined. A few thousand Boer riflemen stationed on the kopjes of Plato could make it safe from invasion again the day the lunar moon, now in a mountain-ringed valley, has been noticed that the rising sun, just